Cup & String Telephone

A classic project that makes for a fun way to talk with your friend!

Kit contains:

- 10 feet of yarn
- 2 paper cups
- 2 paper clips

You will need: a hole-poking implement like a nail or sharp pencil, decorating supplies (optional), and someone to talk to on your "telephone."

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INSTRUCTIONS

(1) Decorate the cups if desired.

(2) Poke holes in the bottom of the cups where there are dots.

(3) Pull the ends of the string through each hole.

(4) On the inside of each cup, tie the end of the string to the paper clip, so the string doesn't slip through the hole.

(5) Hold on to one cup and give the other to a partner. Stand far apart. ***The string must be very tight; if it's loose, it won't work.***

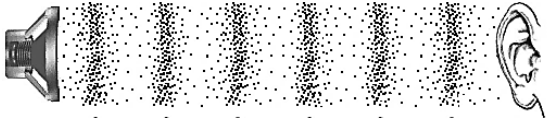
(6) One person talks into the cup while the other person listens with other cup. You should be able to hear even a quiet voice/loud whisper.

WHAT'S GOING ON?

All sound is made and carried by vibrations.

When you talk into the cup, your vocal cords vibrate, creating sound of your voice. Those sound vibrations (or sound waves) travel inside the cup, vibrating the bottom of the cup.

The vibrations are transferred to the string, then travel across and into the bottom of the other cup. The sound waves become vibrations inside the second cup, then travel through the air to the listener's ear drum, causing it to vibrate. Eventually, the vibrations in your ear are turned into nerve signals that travel to your brain and you understand the sound.



A great explanation can be found in this SciShow episode: "The Science of the String Phone" *https://youtu.be/3yqB2KFwJCo*

FACTS ABOUT SOUND & TELEPHONES

- Alexander Graham Bell invented the telephone in 1876.
- The first sentence spoken on a telephone was from Mr. Bell to his assistant: “Mr. Watson, come here, I need you!”
- Sound travels at a speed of about 760 mph!

https://ext.vt.edu/content/dam/ext_vt_edu/topics/4h-youth/makers/files/ww1-telephones.pdf

BOOKS TO LEARN MORE

- *Who Was Alexander Graham Bell? by* Bonnie Bader
- *Alexander Graham Bell* by Barbara Kramer
- *The Telephone* by Marc Tyler Nobleman
- *Sound* by Carolyn Bernhardt
- *Sounds All Around* by Wendy Pfeffer